

Name _____

Key

Date _____

Hour _____

Chapter 10 Quiz Review**10.1 Add and Subtract Polynomials**

Find the sum or difference. Make sure your answer is in standard form. Be careful of your signs! (2 - 4 points each)

1. $(5g^2 - 17g + 8) + (-8g^2 + 11g - 7)$

$$-3g^2 - 6g + 1$$

2. $(x^2 - 16) + (8x^2 + 32)$

$$9x^2 + 16$$

3. $(-2a^2 + 5a^2 - a + 8) + (2a^2 + 3a + 4)$

$$5a^2 - 4a + 12$$

4. $(4x^2 - 1) + (3x + 2x^2)$

$$6x^2 - 3x - 1$$

5. $(5x^3 - x^2 + 3x + 3) + (x^3 - 4x^2 + 17)$

$$6x^3 - 5x^2 + 3x + 20$$

6. $(5r^2 - 9r + 1) + (8r + 13)$

$$5r^2 - 17r - 12$$

10.2 Multiply Polynomials

Find the product. (3 - 4 points each)

7. $(e - 6)(4e^2 + e - 7)$

$$\begin{array}{r}
 4e^2 + e + -7 \\
 e + -6 \\
 \hline
 24e^2 - 6e + 42 \\
 + e^2 - 7e + 0 \\
 \hline
 25e^2 - 23e + 42
 \end{array}$$

8. $(5w + 4)(6w + 9)$

$$30w^2 + 45w + 24w + 36$$

$$30w^2 + 69w + 36$$

9. $(x + 13)(3x - 10)$

$$3x^2 - 10x + 39x - 130$$

$$3x^2 + 29x - 130$$

10. $(3z^3 - 5z^2 + 8)(z + 2)$

$$\begin{array}{r}
 3z^3 - 5z^2 + 8 \\
 z + 2 \\
 \hline
 6z^3 - 10z^2 + 16 \\
 3z^4 - 5z^3 + 8z \\
 \hline
 3z^4 + z^3 - 10z^2 + 8z + 16
 \end{array}$$

11. $(4v + 5)(-3v - 6)$

$$-12v^2 - 24v - 15v - 30$$

$$-12v^2 - 39v - 30$$

12. $(-2c^2)(-c^2 + 2c + 7)$

$$2c^4 - 4c^3 + 14c^2$$

10.3 Special Products of Polynomials

Find The Product. (2 - 3 points each)

13. $(5y - 8)^2$

$$25y^2 - 80y + 64$$

14. $(7h - 4)(7h + 4)$

$$49h^2 - 16$$

15. $(a - 3c)^2$

$$a^2 - 6ac + 9c^2$$

16. $\left(4n + \frac{1}{3}\right)\left(4n - \frac{1}{3}\right)$

$$16n^2 - \frac{1}{9}$$

17. $(5m + 4)^2$

$$25m^2 + 40m + 16$$

18. $(4 - 3x)(4 + 3x)$

$$16 - 9x^2$$

10.4 Solving Polynomial Equations in Factored Form

Solve Each Equation. (2 - 3 points each)

19. $(6x - 5)(x + 2) = 0$

$$6x - 5 = 0 \quad x + 2 = 0$$

$$6x = 5$$

$$x = \frac{5}{6}$$

$$x = -2$$

20. $3j(5j - 11)(j + 6) = 0$

$$3j = 0$$

$$j = 0$$

$$5j - 11 = 0$$

$$5j = 11$$

$$j = 2\frac{1}{5}$$

$$j + 6 = 0$$

$$j = -6$$

21. $(2c - 12)^2 = 0$

$$2c - 12 = 0$$

$$\frac{2c}{2} = \frac{12}{2}$$

22. $(4n - 10)\left(2n + \frac{1}{4}\right)(7n + 14) = 0$

$$4n - 10 = 0$$

$$4n = 10$$

$$n = 2\frac{1}{2}$$

$$2n + \frac{1}{4} = 0$$

$$2n = -\frac{1}{4} \div \frac{2}{2}$$

$$n = -\frac{1}{8}$$

$$7n + 14 = 0$$

$$7n = -14$$

$$n = -2$$